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3. The magnetic recording and/or

reproducing apparatus as claimed in claim 1, further comprising:

memory means for storing a conversion table which includes the average values of the equalized waveform.

4. The magnetic recording and/or reproducing apparatus as claimed in claim 3, further comprising:

control means for updating said conversion table at an arbitrary timing.

5. A magnetic recording and/or reproducing apparatus comprising:  
a look-up table which stores compensation amounts based on errors between ideal values and average values of a reproduced waveform of a signal sequence reproduced from a magnetic recording medium or average values of an equalized waveform which is obtained by equalization of the reproduced waveform; and

a compensation circuit which carries out a recording compensation with respect to a non-linear distortion based on said look-up table when recording the signal sequence on the magnetic recording medium.

6. The magnetic recording and/or

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25           9. A magnetic recording and/or  
reproducing apparatus comprising:  
          reproducing means for reproducing a signal  
sequence from a magnetic recording medium and  
outputting a reproduced waveform;  
30           equalization means for equalizing the  
reproduced waveform and outputting an equalized  
waveform;  
          a look-up table which stores compensation  
amounts based on errors between ideal values and  
35           average values of the reproduced waveform or average  
values of the equalized waveform; and  
          a compensation circuit which carries out a

recording compensation with respect to a non-linear distortion based on said look-up table when recording the signal sequence on the magnetic recording medium.

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10. The magnetic recording and/or reproducing apparatus as claimed in claim 9, further comprising:

memory means for storing said look-up table, and a conversion table which includes the average values of the equalized waveform.

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11. The magnetic recording and/or reproducing apparatus as claimed in claim 10, further comprising:

control means for updating said conversion table and/or said look-up table at an arbitrary timing.

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12. A magnetic recording and/or reproducing apparatus comprising:  
an equalization section which carries out an equalization with respect to a signal sequence reproduced from a magnetic recording medium, and outputs an equalized waveform; and  
a conversion section which converts the equalized waveform into a maximum likelihood sequence by carrying out metric calculation based on

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